

**JP63306546A**  
**OPTICAL RECORDING AND REPRODUCING DEVICE**  
**OLYMPUS OPTICAL CO LTD**  
**Inventor(s): ; HORIKAWA YOSHIKAKI**  
**Application No. 62142220, Filed 19870609, Published 19881214**

**Abstract:** PURPOSE: To sharply increase the recording capacity of an information recording medium by arranging a condenser lens for forming a condensing point on a position conjugate with a recording layer in front of a detector and positioning a pin hole on the condensing point.

CONSTITUTION: The condenser lens 6 for forming its condensing point on a position conjugate with the recording layer 5b is arranged in front of the detector 8 and the pin hole 7 is positioned on the condensing point to constitute a detecting system as a confocal system. Since the pin hole 7 is arranged on the condensing position of the condenser lens 6 which is a conjugate position with the recording layer 5b, reflected light from recording layers 5a, 5c other than the recording layer 5b is not reached to the detector 8. Thereby, only the information on the recording layer 5b is detected. Even if an interval between the recording layers in the information recording medium is short, no detecting error is generated, so that the recording capacity of the information recording medium can be sharply increased.

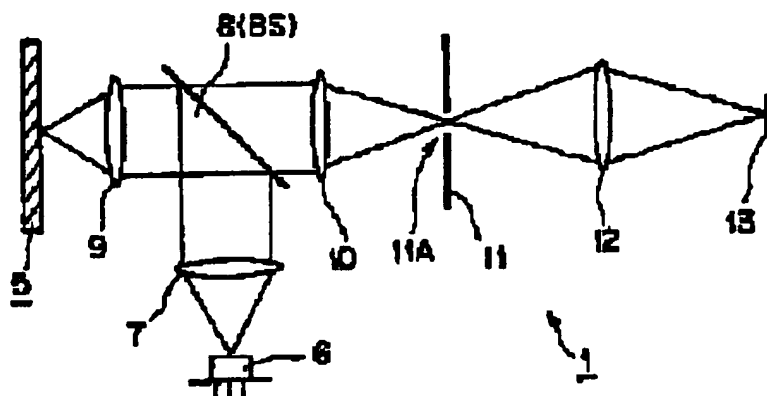
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**Int'l Class:** G11B007135

**MicroPatent Reference Number:** 000162261

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JP08185640A

**OPTICAL PICKUP DEVICE FOR MULTILAYERED OPTICAL DISK**

SONY CORP

Inventor(s): ; KATO YOSHIKI ; FUKUMOTO ATSUSHI

Application No. 06329160, Filed 19941228, Published 19960716

**Abstract: PURPOSE:** To surely perform tracking control, focusing control, etc., by providing a member for shielding beams reflected on a non- focused information signal layer.

**CONSTITUTION:** This device 1 is provided with a light shielding plate 11 having a pin hole 11A. Then, a photodetector 13 receives surely only the beams reflected the non- focused information signal layer of a double-layered optical disk 5. On the other hand, the stray beams of the beams reflected the non- focused information signal layer of the disk 5 are shielded surely. Thus, at the time of reading and reproducing the information signal, the photodetector 13 is not affected adversely by the stray beams of the beams reflected on the information signal layer of the disk 5 to which an objective lens 9 is not focused.

Int'l Class: G11B007135 G11B01110

MicroPatent Reference Number: 000087514

**SOLUTION:** Reflected light from an optical disk medium is incident upon a reproducing optical system through a condenser lens 107. A condenser surface of the condenser lens 107 is separated from an incident surface by a length equivalent to a focal distance and on the condenser surface a Ti thin film 108 having about 100 nm thickness is formed by a sputtering method. A light beam from a light source 113 is made to a parallel beam by a lens 114 and is incident upon the condenser lens 107. When the Ti thin film 108 is brought into a focus, the Ti thin film 108 is melted in this focus position to form a pin hole area 108a. Consequently, a pin hole filter 108 for passing only a central part of the light beam is formed on the